

USSN 10/719,187

CASE CT-2717-NP

REMARKS

Claims 1 – 4 and 6 – 8 are pending in this application. Claims 6 – 8 are again rejected under 35 USC §112, first paragraph. Claims 2 – 3 are objected under 37 CFR §1.75(c) as being of improper dependent form. Claims 1 – 4 and 6 – 8 are also newly rejected under 35 USC §101 as claiming the same invention.

REJECTION UNDER 35 USC §112, FIRST PARAGRAPH

Claims 6 – 8 are again rejected under 35 USC §112, first paragraph. The Examiner states that there is no disclosure of a nexus between the mechanism and the treatment of one condition. The Examiner also states that Applicants are attempting to claim every disorder as well as future disorders.

In the interest of advancing this prosecution and providing a consistent response, Applicants have amended claim 6 to clearly define the diseases which pertain to the disorders related to the activity associated with KCNQ potassium channel activity and to disorders associated with clinically proven drugs used as controls based on art-recognized tests.

Applicants believe that the claimed compounds would be useful for the diseases specifically identified in currently amended claim 6. Applicants previously directed the Examiner's attention to Applicants' US Patent 6,831,080 (*Wu, et al.*), US Patent 6,900,210 (*Wu, et al.*), and pending US Application USSN 10/719,188 (*Wu, et al.*), which describes similar KCNQ mechanism compounds in several *in vivo* art-recognized biological tests to demonstrate the compounds as useful for the claimed diseases. There are also several clinically useful compounds run as positive controls, such as gabapentin (Neurotin), Buspirone (anxiety) and retigabine, in tests wherein KCNQ openers are active.

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In addition, Applicants submit herewith a reference cited in copending application USSN 10/719,188, which was written by a colleague of the present inventors that clearly supports the mechanism-utility of KCNQ potassium channel openers. Applicants, as well as Dr. Gribkoff [Gribkoff, V.K., "The therapeutic potential of neuronal KCNQ channel modulators", *Expert Opinions Ther. Targets* (2003) 7(6) p. 737-748], believe that the instant compounds would have the same utility based on the art-recognized tests and Applicants respectfully request reconsideration of the rejection based on the currently amended claim 6 and the remarks.

**OBJECTION UNDER 37 CFR §1.75(c)**

The Examiner objected to claims 2 – 3 as failing to further limit the subject matter of the previous claim. Specifically, the Examiner states that in claim 1 the corresponding "Het" group is limited to pyridinyl, pyrimidinyl or pyrazinyl.

Applicants respectfully disagree. The definition of "Het" in claim 1 and the definition of "Het" in claim 2 are identical. The limitation or proviso in claims 1 and 2 are identical. Claim 2 further limits the subject matter of claim 1 as follows:

1. The R<sup>2</sup> substitution is now a specific enantiomer.
2. In the definition of R<sup>2</sup>, (a) CF<sub>3</sub> is deleted and (b) C<sub>1-4</sub>alkyl is limited to methyl.

Claim 3 claims specific species and is by definition limited further.

Applicants respectfully request the Examiner to withdraw this objection.

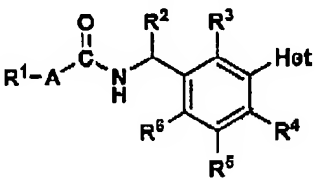
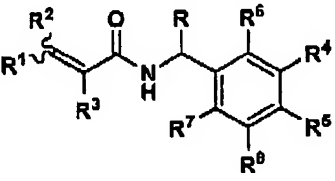
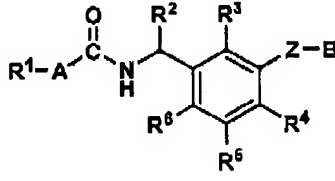
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REJECTION UNDER 35 USC §101

The Examiner rejected claims 1 – 4 and 6 – 8 under 35 USC §101 as claiming the "same invention" of claims 1 – 7 of US Patent 6,900,210 and claims 1 – 27 of US Patent 6,831,080.

Applicants respectfully disagree and request that this double-patenting rejection be withdrawn based on the following comparison of claims from the instant application and the two cited patents.

USSN 10/719,187 Present application	US 6,831,080	US 6,900,210
		
<p>Het is selected from the group consisting of .....</p> <p>..... provided that when Het is pyridinyl, pyrimidinyl or pyrazinyl, then</p> <p>A is <u>not</u> -CH=CH-.</p>	<p>R<sup>4</sup> is selected from the group consisting of .....</p> <p>..... pyridinyl, pyrimidinyl, piperazinyl, and pyrazinyl .....</p> <p>"A" is -CH=CH-.</p>	<p>Z is oxygen or -NR<sup>7</sup>(CH<sub>2</sub>)<sub>m</sub>;</p> <p>B is pyridinyl, pyrimidinyl or pyrazinyl .....</p>

Claim 1 of the instant application specifically excludes the following substituents:

- (1) The proviso in claim 1 reads that when A is "-C = C" then Het is not pyridinyl, pyrimidinyl, pyrazinyl as claimed in US Patent 6,831,080.

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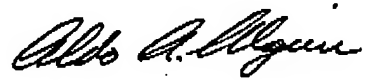
(2) The claims of the present application do not include the definition of "Z" being oxygen or  $-NR^7(CH_2)_m-$ . There is no provision for a hetero atom between the phenyl ring and "Het" in the present claim.

Applicants believe there is no overlap between the claims of the instant application and the claims of US Patent 6,831,080 or US Patent 6,900,210 and, therefore, the present claims do not claim the "same invention". Applicants respectfully request that the rejection based on the "same invention" be withdrawn.

In view of the foregoing amendment and remarks, Applicants believe that the rejections and objections have been traversed and favorable action on the amended claims is respectfully solicited.

Respectfully submitted,

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Enclosures: Amended Claims  
Information Disclosure Statement